

APS Infrastructure Standards for Beamlines

In order to meet Department of Energy and Argonne requirements for cyber security and configuration management, and APS requirements for reliability and performance, the APS IT group created and maintains a set of standards for hardware, server, workstation and laptop configuration, and operations activities.

These standards are periodically reviewed, especially hardware, since vendors, models and options change frequently.

Area	APS Standard	Notes
Hardware		
Network cabling	CAT 6A tested to 10 Gb/sec	
Network switches	HP ProCurve 5000 family	Unmanaged switches are discouraged
IOC TTY consoles	Avocent network terminal server	
Servers	HP ProLiant DL300 family	
Server direct-attached storage	HP Smart Array 2000 & 3000	
Workstations	HP and Dell business class	
Laptops	HP and Dell business class	
Operations		
Remote Access	Available through a dedicated ssh gateway, VPN, or the Citrix Portal	Beamline networks are orange (no direct conduits)
Remote Security	Crypto Card token	

Private Network Space	Private networks are encouraged for any equipment that does not require access outside of the beamline network.	
File Backups – Servers	Netbackup 7.6	Full backups on machine studies days, incremental backups all other days.
User workstations and laptops	CrashPlan	Via a dedicated appliance. Backups are user-directed.